



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

*Sp*

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/605,009	09/01/2003	Kuo-Cheng Chen	HTCP0010USA	2008
27765	7590	03/09/2005	EXAMINER	
NORTH AMERICA INTERNATIONAL PATENT OFFICE (NAIPC)				VY, HUNG T
P.O. BOX 506				
MERRIFIELD, VA 22116				
ART UNIT		PAPER NUMBER		
		2821		

DATE MAILED: 03/09/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/605,009	<b>Applicant(s)</b> CHEN ET AL.
<b>Examiner</b> Hung T. Vy	<b>Art Unit</b> 2821	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

1)  Responsive to communication(s) filed on \_\_\_\_.

2a)  This action is **FINAL**.                            2b)  This action is non-final.

3)  Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## **Disposition of Claims**

4)  Claim(s) 1-15 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.

5)  Claim(s) \_\_\_\_\_ is/are allowed.

6)  Claim(s) 1-15 is/are rejected.

7)  Claim(s) \_\_\_\_\_ is/are objected to.

8)  Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

9)  The specification is objected to by the Examiner.

10)  The drawing(s) filed on \_\_\_\_\_ is/are: a)  accepted or b)  objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)  The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

12)  Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a)  All b)  Some \* c)  None of:  
1.  Certified copies of the priority documents have been received.  
2.  Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3.  Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

1)  Notice of References Cited (PTO-892)  
2)  Notice of Draftsperson's Patent Drawing Review (PTO-948)  
3)  Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 2/4/2004.

4)  Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_ .

5)  Notice of Informal Patent Application (PTO-152)

6)  Other: \_\_\_\_\_ .

## **DETAILED ACTION**

### **Acknowledges**

1. Receipt is acknowledged of the following items from the Applicant.

Information Disclosure Statement (IDS) filed on 9/23/2003, 10/20/2003 and 2/04/2004. The references cited on the PTOL 1449 form have been considered.

### **Specification**

2. The specification is objected to for the following reason:

In the paragraph 0007, line 7-8, the feed pad and the circuit board cannot be the same as 18. Correction is required.

### **Claim Rejections - 35 USC § 102**

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

35 U.S.C. § 102(e), as revised by the AIPA and H.R. 2215, applies to all qualifying references, except when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. For such patents, the prior art date is determined under 35 U.S.C. § 102(e) as it existed prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. § 102(e)).

4. Claims 1-2, 4-5, and 8-10 are rejected under 35 U. S. C. § 102 (e) as being anticipated by Lai et al., WO 96/27219.

Claim 1, Lai et al. disclose an antenna for wireless communication comprising a radiator 14 for receiving and transmitting radio frequency signals comprising a plurality of recesses 34,35,36 formed on the side of the radiator 14(See fig. 1-2); a feeding plate

20 (see fig. 1) stretching out from the radiator 14 for transmitting the RF signals; and a ground plate 24 stretching out from the radiator for grounding 12.

Claim 2, Lai et al. disclose the radiator 14 formed on the substrate 30, and the substrate further comprises an apertures 20 (See fig. 1).

Claims 4-5, Lai et al. disclose the ground plate 24 is connected to the ground plane 12; the ground plane 12 is formed on the substrate 30.

Claims 8-10, Lai et al. disclose the plurality of recesses is arranged asymmetrically on two side of the radiator 14 (see fig. 1-2)

5. Claims 1-10 are rejected under 35 U. S. C. § 102 (e) as being anticipated by Nishikawa et al., U.S. Patent. No. 6,424,298.

Claim 1, Nishikawa et al. disclose an antenna for wireless communication comprising a radiator 35 for receiving and transmitting radio frequency signals comprising a plurality of recesses formed on the side of the radiator (See fig. 15); a feeding plate 56 (see fig. 19) stretching out from the radiator 54 for transmitting the RF signals; and a ground plate stretching out from the radiator for grounding (31).

### **Claim Rejections - 35 U.S.C. § 103**

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

7. Claims 3, 6-7 and 11-15 are rejected under 35 U.S.C. 103 (a) as being unpatentable over Lai et al., WO 96/27219 in view of Kamei et al., U.S. Patent. No. 6,630,911.

Claims 6-7, and 11-12, Lai et al. disclose an antenna 14 for wireless communication comprising a substrate 30 having a long side, a short side, and apertures 20 formed along the short side and penetrating the substrate 30, a radiator 14 formed for receiving and transmitting RF signals on the upper surface of the substrate 30 comprising a plurality of recesses 35,34,36 formed on the side of the radiator 14, a feeding plate 26 connected to the radiator 14 via the apertures 20 for transmitting the RF signals; a ground plane 12 formed on the lower surface of the substrate 30; a ground plate connected to the radiator 14 and the ground plane via the apertures, but Lai et al. do not disclose the trench. However, Kamei et al. disclose a trench formed between the feeding plate 118 and the ground plate 120 (See fig. 13 –16). It would have been obvious at the time the invention was made to a person having ordinary skill in the art to modify Lai et al. to have trench as taught by Kamei et al. The motivation for doing so would have been to provide trench in order to have influence the impedance antenna. Further, since it has been held that rearranging parts of an invention involves only routine skill in the art. *In re Japikse*, 86 USPQ 70.

Claim 3, Kamei et al. disclose the feeding plate and the ground plate are installed along the short side (See fig. 16).

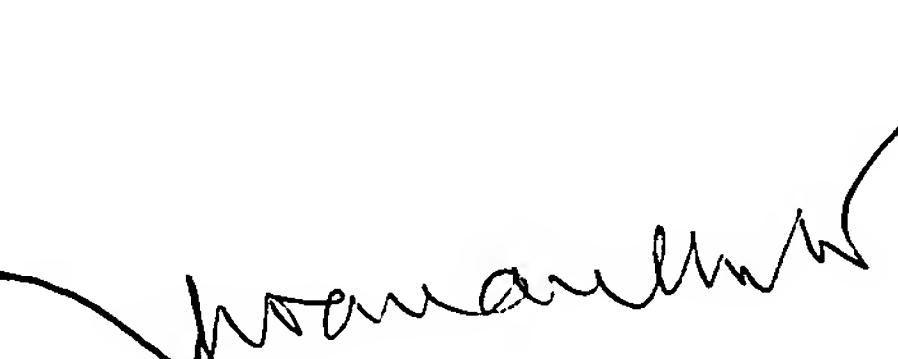
Claims 13-15, Lai et al. disclose the plurality of recesses is arranged asymmetrically on two side of the radiator 14 (see fig. 1-2).

### Conclusion

8. When responding to the office action, Applicants are advised to provide the examiner with the line numbers and page numbers in the application and/or references cited to assist the examiner to locate the appropriate paragraphs.
  
9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hung Vy whose telephone number is (571) 272-1954. The examiner can normally be reached on Monday-Friday 8:30 am - 5:30pm. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Don Wong can be reached on (571) 272-1834. The fax numbers for the organization where this application or proceeding is assigned are (703) 872-9306 for regular communications and (703) 308-7722 for After Final communications.

Information regarding the status of an application may be obtained from the patent Application Information Retrieval (PAIR) system. Status information for published application may be obtained from either private Pair or Public Pair. Status information for unpublished applications is available through Private Pair only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have question on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Hung T. Vy  
Art Unit 2821  
March 3, 2005



Hoanganh Le  
Primary Examiner